

REMARKS

This Amendment is submitted in reply to the Final Office Action dated January 21, 2010. Applicant respectfully requests reconsideration and further examination of the patent application pursuant to 37 C.F.R. § 1.113.

Summary of the Examiner's rejections

Claims 27-52 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 27, 28, 31-35, 37-40, 44, 47-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams (US 6,144,669) in view of Nakatsugawa (US 6,243,830B1).

Claims 29, 30, 45, and 46 under 35 U.S.C. § 103(a) as being unpatentable over Williams (US 6,144,669) in view of Nakatsugawa (US 6,243,830B1) in further view of Sakaguchi (US 2003/0212855A1).

Claims 36, 42-43, and 52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Williams (US 6,144,669) in view of Nakatsugawa (US 6,243,830B1) in further view of Leung (US 2002/0132613A1).

Summary of Amendments

Applicant has amended claims 27, 37-39, and 44-52, and added new claims 53-55. The support for the amendments to independent claim 27, 37-39, and 44-52 can for instance be found on page 12, line 1-page 13, line 26 and page 19, lines 28-30 in the originally filed patent application. The support for the new claims 53-55 can for instance be found on page 21, line 25-page 22, lines 26, and FIGS. 7-8 in the original filed patent application. No new subject matter has been added.

Remarks regarding the §101 rejections

Claim 27 stands rejected under 35 U.S.C. § 101 because the recited method is not tied to a particular machine or does not transform underlying subject matter (such as an article or material) to a different state or thing. Applicant has amended claim 27 so

that the recited method and each of the claimed steps are tied to either a first communication unit or a second communication unit. Accordingly, Applicant respectfully requests the removal of this rejection to independent claim 27 and the corresponding dependent claims 28-36.

Claims 37 and 38 stand rejected under 35 U.S.C. § 101 because the Applicant attempted to claim non-statutory subject matter (i.e. software). Applicant has amended claims 37-39 and 44-52 such that the recited elements therein are not software per se. Accordingly, Applicant respectfully requests the removal of this rejection to independent claim 37 and 38 and the corresponding dependent claims 39-40 and 42-52.

Remarks regarding the §103(a) rejections

Applicant respectfully submits that amended independent claim 27 is not disclosed or suggested by Williams, Nakatsugawa, Sakaguchi, Leung, or any combination thereof. The amended independent claim 27 is as follows:

27. A method of managing a state memory adapted for storing state information applicable in a message communication between communications units in a communications system, the method implemented by a first communication unit and a second communication unit comprising the steps of:

- defining at the first communication unit at least two message classes of the messages communicated between the first communication unit and the second communication unit; and

- dividing said state memory in the first communication unit into at least two memory portions, each memory portion being assigned for storing state information associated with a specific message class;

- and in that said state memory is arranged in the first communication unit and is allocated for storing state information used in message communication with the second communications unit.

- and in that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit (emphasis added).

The Examiner has indicated that Williams "does not specifically disclose that said state memory is arranged in a first communication unit and is allocated for storing state information used in message communication with a second communications unit; and in

that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit" (see pages 5 and 6 in the Final Office Action). In an attempt to correct this defect the Examiner cited Nakatsugawa and stated the following:

Nakatsugawa shows and discloses a state information managing method which is able to manage easily state information of respective communication units, wherein said state information is arranged in a first communication unit and is allocated for storing state information used in message communication with a second communications unit (abstract, column 2 lines 20-34); and in that said second communications unit requesting said first communications unit to allocate state memory space utilized for storing said state information used in said message communication with said second communications unit (abstract, column 2 lines 20-34 lines 53-67).

(see page 6 in the Final Office Action)

Applicant respectfully disagrees and submits that Nakatsugawa fails to disclose or suggest the claimed feature where a first communication unit has the state memory for storing state information used in message communication with a second communications unit and where the second communications unit requests the first communication unit to allocate state memory space utilized for storing said state information used in the message communication with the second communications unit (emphasis added). In this regard, Nakatsugawa discloses the following:

In a communication system wherein a collecting communication unit of a plurality of communication units collects state information from report communication units to manage the state information, each of the report communication units comprises a state information memory for storing the state information of own communication unit, a state monitoring portion for monitoring the state information of own communication unit and then rewriting the stored state information into new state information after change if the state information has been changed, and a transmitting/receiving portion for adding the stored state information and own address to the recovery command and then transmitting the recovery command when respective report communication units receive the recovery command for recovering the state information, whereby the collecting communication unit can receive the recovery command to which

changed state information and their own addresses of respective report communication units are added collectively.

(see abstract)

The present invention has been made in light of the above circumstances, and it is an object of the present invention to provide a state information managing method which is able to manage easily state information of respective communication units and also reduce a communication traffic volume required for management of the state information, and a communication system.

In order to achieve the above object, according to the present invention, there is provided a state information managing method wherein collecting communication unit in a plurality of communication units are able to collect state information indicating respective states from one or more report communication units except the collecting communication unit to manage their state information in a communication system in which the plurality of communication units are connected to a bus to exchange mutual communication...

According to the present invention, in respective report communication units, it is monitored whether or not the state information in own communication unit has been changed, then the state information stored in a memory portion is rewritten if the state information has been changed, then the changed state information and own address are added to the recovery command when respective report communication units receive the recovery command, and then the recovery command is transmitted.

Then, after the recovery command has been transmitted to all the report communication units, the collecting communication unit receives the recovery command to which the changed state information and their own addresses of respective report communication units are added collectively.

(column 2 lines 20-34 lines 53-67)(emphasis added).

Unfortunately, the Examiner appears to have mischaracterized Nakatsugawa when rejecting the claimed invention and in particular the claimed feature where the second communications unit requests the first communication unit to allocate state memory space utilized for storing said state information used in the message communication with the second communications unit. The Examiner in discussing Nakatsugawa stated the following:

Nakatsugawa clearly discloses that the report communication unit (second communications unit) has a memory portion allocated to store state information in the collecting communication unit (first communication unit) and that state

information and addressed of the report communication unit are added (at the request of the report communication unit) to the collecting communication unit (first communication unit). Therefore, the second communications unit requests the first communication unit to allocate state memory space utilized for storing said state information used in the message communication with the second communication unit.

(see page 23 in the Final Office Action)(emphasis added)

Applicant respectfully submits that Nakatsugawa's report communication unit does not request anything of the collecting communication unit. Nakatsugawa's disclosure is clear in that the collecting communication unit transmits a recovery command to the report communication unit and once the report communication unit receives the recovery command and if the report communication unit's state information has changed then the report communication unit adds the changed state information and it's address to the previously received recovery command and then transmits the revised recovery command to the collecting communication unit (see col. 2, lines 53-67). As can be seen, Nakatsugawa's report communication unit is not requesting anything of the collecting communication unit but instead is only responding to the collecting communication unit's recovery command. Hence, if Nakatsugawa's report communication unit does not request anything of the collecting unit then it follows that Nakatsugawa's report communication unit does not request the collecting unit to allocate state memory space utilized for storing state information used in the message communication therewith. In view of at least the foregoing, Applicant submits that the aforementioned substantial difference between the amended independent claim 27 and the cited prior art are indicative of the patentability of the amended independent claim 27 and the corresponding dependent claims 28-36 and 53.

Furthermore, Applicant respectfully submits that the amended independent claims 37 and 38 are patentable in view of Williams, Nakatsugawa, Sakaguchi, Leung or any combination thereof. The amended independent claims 37 and 38 recite the same or similar distinguishing limitations that have been discussed above with respect to the amended independent claim 27. As such, the aforementioned remarks regarding the

patentability of amended independent claim 27 apply as well to amended independent claims 37 and 38. Accordingly, Applicant respectfully requests the allowance of the amended independent claims 37 and 38 and the corresponding dependent claims 39-40, 42-52 and 54-55.

Remarks regarding the new dependent claims 53-55

Applicant respectfully submits that new dependent claim 53 is patentable in view of Williams, Nakatsugawa, Sakaguchi, Leung or any combination thereof. The dependent claim 53 is as follows:

53. The method according to claim 1, wherein the state memory is divided before said first communication unit and said second communication unit start transmitting data messages therebetween.

The new claim 53 has been added to indicate that the first communication unit's state memory is divided before the transmission of data messages between the first communication unit and the second communication unit. This limitation further distinguishes the present invention from the cited prior art Williams, Nakatsugawa, Sakaguchi, Leung. Thus, Applicant respectfully submits that the new dependent claim 53 is patentable over Williams, Nakatsugawa, Sakaguchi, Leung, or any combination thereof

Furthermore, Applicant respectfully submits that the new dependent claims 54 and 55 are patentable in view of Williams, Nakatsugawa, Sakaguchi, Leung or any combination thereof. The new dependent claims 54 and 55 recite the same or similar distinguishing limitations that have been discussed above with respect to the new dependent claim 53. As such, the aforementioned remarks regarding the patentability of new dependent claim 53 apply as well to the new dependent claims 54 and 55. Accordingly, Applicant respectfully requests the allowance of the new dependent claims 54 and 55.

CONCLUSION

In view of the foregoing remarks, Applicant believes all of the claims currently pending in the application to be in a condition for allowance. Therefore, Applicant respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for pending claims 27-40 and 42-55.

The Commissioner is hereby authorized to charge any fees for this paper to Deposit Account No. 50-1379.

Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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